Range Minimum Query

- Given a sequence of n integers a_0,. . ., a_{n-1}. We denote rmq(i, j) the minimum element of the sequence a_i, a_{i+1}, . . ., a_j. Given m pairs (i_1, j_1),. . ., (i_m, j_m), compute the sum Q = rmq(i_1, j_1) + . . . + rmq(i_m, j_m)
- **Input**
  - Line 1: contains an integer n (1 <= n <= 10^6)
  - Line 2: contains a_0, . . . , a_{n-1} (1 <= a_i <= 10^6)
  - Line 3: contains m (1 <= m <= 10^6)
  - Line k+3 (k = 1, . . ., m): contains i_k, j_k (0 <= i_k < j_k < n)
- **Output**
  - Write the value Q
- Example

stdin	**stdout**
16 2 4 6 1 6 8 7 3 3 5 8 9 1 2 6 4 4 1 5 0 9 1 15 6 10	6